PR-20. MICROWAVE ASSISTED SYNTHESIS OF *N*-SUBSTITUTED MALEIMIDE DERIVATIVES AS EXOGENOUS ANTIOXIDANT AGENTS

A. Rammohan[1, 2], J. R. Garcia[2], G. V. Zyryanov[1, 3]

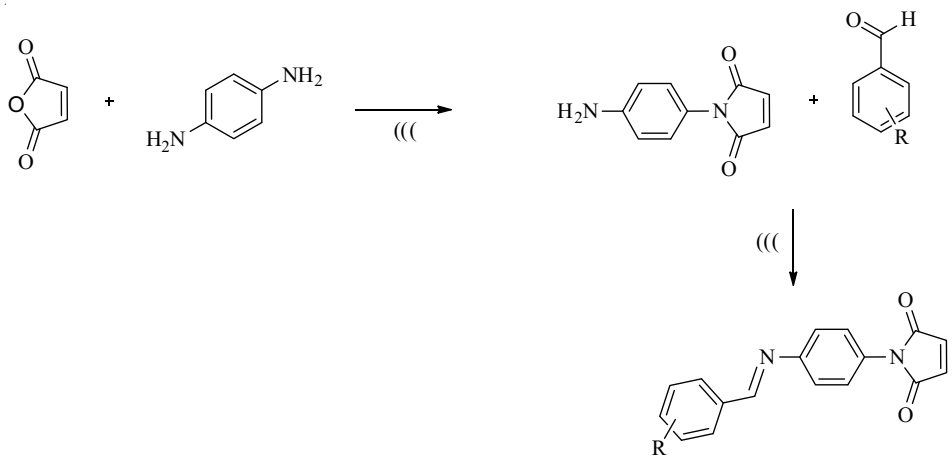
[1] Ural Federal University of the first President of Russia B. N. Yeltsin,
Mira St., 19, Yekaterinburg, 620002, Russia

[2] Department of Chemistry of the State University of Ponta Grossa,
Av. Gal. Carlos Cavalcanti, 4748 – Uvaranas, Ponta Grossa – PR, Brazil, 84030-900

[3] I. Ya. Postovsky Institute of Organic Synthesis UB RAS,
S. Kovalevskoy/Akademicheskaya St., 20/22, Yekaterinburg, 620990, Russia

E-mail: rammohan4ever@gmail.com

The present work was aimed to synthesize a series of *N*-substituted maleimide derivatives have been developed *via* acetic acid mediated microwave reaction pathway [1, 2], which was identified as the incomparable method for the synthesis of maleimide compounds. All the synthesized compounds were tested for their antioxidant activity by DPPH and H_2O_2 assay [3]. Methoxy and amino attached compounds were displayed higher antioxidant activity in two methods. The structure-activity relationship demonstrated that the compounds having electron releasing substituent generally showed beneficial activity than electron capture substitution cores. These compounds may be useful as an exogenous antioxidant.



References

1. *Rocchi D.*, *González J. F.*, *Menéndez J. C.* Microwave-assisted, sequential four-component synthesis of polysubstituted 5,6-dihydroquinazolinones from acyclic precursors and a mild, halogenation-initiated method for their aromatization under focused microwave irradiation // Green Chem. Royal Society of Chemistry. 2013. Vol. 15, № 2. P. 511.

2. Microwave-assisted facile synthesis of trisubstituted pyrrole derivatives / Reddy V. Hanuman [et al.] // Res. Chem. Intermed. Springer Netherlands. 2015. Vol. 41, № 12. P. 9805–9815.

3. *Ruch R. J.*, *Cheng S.*, *Klaunig J. E.* Prevention of cytotoxicity and inhibition of intercellular communication by antioxidant catechins isolated from Chinese green tea // Carcinogenesis. Vol. 10, № 6. Oxford University Press. 1989. P. 1003–1008.